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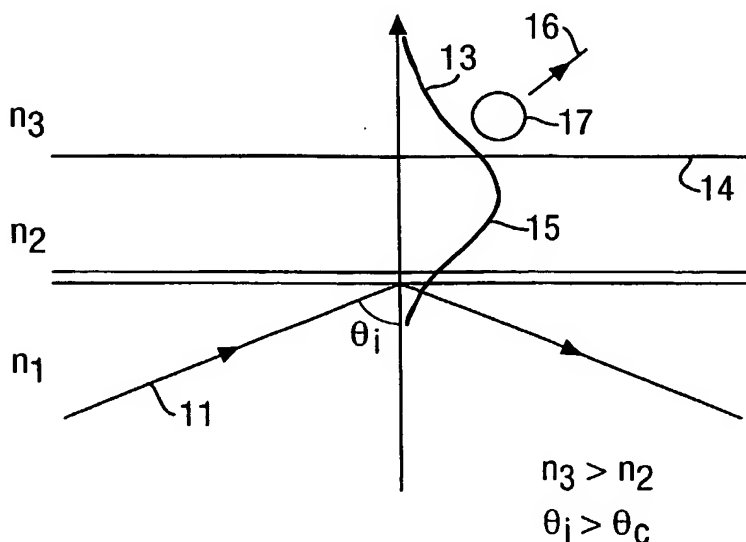
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(54) Title: A WAVEGUIDE STRUCTURE



(57) Abstract: A novel single point leaky waveguide structure and its use as an optical sensor for the detection of particles is disclosed. The waveguide structure is fabricated to increase the overlap of the evanescent field extension from the sensor surface with particles in the bulk solution of a flowing system so as to place most of the volume of the particles within the evanescent field. Increasing the overlap of the evanescent field with the particles and permitting mode propagation along the direction of flow for a few millimetres provides an effective interrogation approach for multiple particle detection in a single flow channel.

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